

Statistics 101 – Section L

Spring 2009

Instructor: W. Robert Stephenson (a.k.a. Dr. Bob)
Office: 1407 Wilson Hall or 1127 HNSB Phone: (515) 294-7805
 email: wrstephe@iastate.edu
 section website: www.public.iastate.edu/~wrstephe/stat101L.html
Office Hours: **MWF 10:00 to 10:50 am, 12:10 to 1:00 pm, in 1127 HNSB**
And by appointment, in 1407 Wilson Hall
Lecture: MWF 1:10 to 2:00 pm, in 268 Carver
Laboratory: W 2:10 to 4:00 pm, in 205 Carver
Required Text: *Stats: Data and Models*, 2nd Edition, Richard D. DeVeaux, Paul F. Velleman and David E. Bock, Pearson/Addison Wesley, 2008.

Objectives: The objectives of the course are to help students develop an understanding of statistical thinking and to enable students to apply basic statistical techniques. By the end of the course students should be informed and critical consumers and producers of quantitative arguments.

Syllabus:

	Tentative Dates				Material	Text
M	Jan 12				Stats Starts Here	Chapter 1
W	Jan 14				Data, Display/Summary of Categorical Data	Chapters 2 & 3
F	Jan 16	-	W	Jan 21	Display/Summary of Quantitative Data	Chapter 4
M	Jan 19				NO CLASS – Martin Luther King Day	
W	Jan 21	-	F	Jan 23	Understanding/Comparing Distributions	Chapter 5
M	Jan 26	-	F	Jan 30	The Standard Deviation as a Ruler and The Normal Model	Chapter 6
M	Feb 2	-	W	Feb 4	Scatterplots, Association, Correlation	Chapter 7
EXAM 1 – Friday, February 6						Chapters 1 - 6
M	Feb 9	-	F	Feb 13	Linear Regression, Regression Wisdom	Chapters 8 & 9
M	Feb 16	-	W	Feb 18	Re-expressing Data	Chapter 10
F	Feb 20				Understanding Randomness	Chapter 11
M	Feb 23				Sample Surveys	Chapter 12
W	Feb 25	-	F	Feb 27	Experiments/Observational Studies	Chapter 13
M	Mar 2				From Randomness to Probability	Chapter 14
W	Mar 4				Probability Rules	Chapter 15
EXAM 2 – Friday, March 6						Chapters 7 – 13
M	Mar 9	-	F	Mar 13	Random Variables/Sampling Distribution Models	Chapter 16 & 18I
M	Mar 16	-	F	Mar 20	Spring Break	
M	Mar 23	-			Sampling Distribution Models	Chapter 18I
W	Mar 25	-	F	Mar 27	Confidence Intervals for Proportions	Chapter 19
M	Mar 30	-	M	Apr 6	Testing Hypotheses about Proportions, More About Tests	Chapters 20 & 21
W	Apr 8	-			Sampling Distribution Models	Chapter 18II
Exam 3 – Friday, April 10						Chapters 18I - 21
M	Apr 13	-	W	Apr 15	Inferences About Means	Chapter 23
F	Apr 17	-	M	Apr 20	Comparing Means	Chapter 24
W	Apr 22	-	F	Apr 24	Paired Samples and Blocks	Chapter 25
M	Apr 27	-	F	May 1	Comparing Counts	Chapter 26
Th	May 7				FINAL EXAM – Thursday, May 7	

Course Information and Policies

- **Disability:** Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact Dr. Bob Stephenson, 1407 Wilson Hall, 294-7805, wrstephe@iastate.edu, within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Before meeting with Dr. Stephenson, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-6624.
- **Academic Dishonesty:** This class will follow Iowa State University policy on academic dishonesty found in the Iowa State University Catalog. A score of zero will be given for the entire assignment in which the academic dishonesty occurred.
- **Exams:** The first three exams will be given during regular class time.
- **Final Exam:** The final exam is **tentatively** scheduled for Thursday, May 7 from noon until 2 pm. **Do not make plans for semester break before you know your complete final exam schedule.**
- **Lab:** There is a two-hour laboratory scheduled each week. Labs provide the opportunity to actively experience statistical ideas discussed in lecture. Attendance at the lab is mandatory. In addition to doing the laboratory activities you can get help from the lab instructor and/or course instructor. Bring your book, class notes and a calculator to the lab. Because laboratories involve group activities you cannot make up missed labs. At the end of the semester, the lab portion of the grade will be scaled to allow you to miss up to 10% of the lab points possible without penalty.
- **Homework:** Individual practice is an important part of learning. For this reason homework assignments will be given throughout the semester. Homework assignments are due at the end of the lecture period on the due date. Late homework assignments will not be accepted. At the end of the semester, the homework portion of the grade will be scaled to allow you to miss up to 10% of the total number of homework points possible without penalty. Solutions to the homework problems will be posted on the course website.
- **Quizzes:** Be prepared to take a short quiz at any time during lecture and/or lab. Quizzes will not be announced, so you are encouraged to attend class on a regular basis. Quizzes will be based on information presented in class, on labs and homework. Make-up quizzes will not be given **under any circumstances**. The quiz portion of your grade will be scaled to allow you to miss up to 10% of the total number of homework points possible without penalty.
- **Computing:** Some labs/homeworks will incorporate work on the computer using the statistical analysis package JMP. Detailed instructions will be provided with all computer assignments. Be sure to allow enough time to complete the JMP assignments. It is your responsibility to allow for computer failures and/or difficulty finding a computer with the JMP software. JMP software can be downloaded to your personal computer for free, for more information go to <https://www.sitelicensed.iastate.edu/>. If you have questions about how to do this, go to the Solutions Center in Durham.
- **Project:** A project will be assigned during the semester. This project is intended to expose students to the collection and statistical analysis of data to solve real world problems. Students will work in groups. Specific details will be given later in the semester.
- **Grading:** Letter grades including plus/minus will be given based on performance on exams, labs, homework and the project. The percentage distribution is as follows:

Exam 1	75 pts
Exam 2	75 pts
Exam 3	75 pts
Final Exam	125 pts
Labs	50 pts
Homework	50 pts
Project	50 pts
Total	500 pts